

Scenario =====>	Historic Data [DOF, BOE & CEC IEPR]		Projections ~2003 IPER "Old Forecast" \$1.75gas & pre AB1493			Revised Forecast 2005 IEPR \$3.00gas & AB1493			AB 1007 assuming 10% LCFS in 2020 using 20% Alt Fuel			AB 1007 "Vision" High Fuel Efficiency & 80% GHG Red. Case									
Factor	1990	2005	2020	2030	2050	2020	2030	2050	2020	2030	2050	2020	2030	2050	Units						
CA Population	30	37	43	47	55	43	47	55	43	47	55	43	47	55	millions						
VMT/Person	7.9	8.2	8.7	9.4	10.3	8.4	9.1	10.0	8.4	9.1	10.0	8.4	8.6	8.2	1000 mi/person/yr						
VMT red. Factor (expressed as decrease from projected level)						0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.08	0.2	Frac. of Base Forecast						
Calc. Annual VMT =	237	303	374	442	567	363	429	550	363	429	550	363	406	453	Billion Mi/yr						
Estimated Avg. MPG	18.8	20.5	20.0	20.0	20.0	23.4	26.0	26.0	23.9	31.7	39.4	23.9	36.5	70.5	Fleet avg mpg [in ggeq.]						
Calc. Trans. Energy =	12.6	14.8	18.7	22.1	28.3	15.5	16.5	21.1	15.2	13.5	14.0	15.2	11.1	6.4	Bn gas-gal.eq./yr						
						LCFS Performance =				0.90	0.73	0.51	0.90	0.73	0.38						
Percent of Energy Fuel or Vehicle Type assumed in analysis																					
Gas & Diesel	100	100	100	100	100	100	100	100	75	50	30	75	50	18	Percent of Trans- portation Energy by Each Type						
E-85 in FFVs	0	0	0	0	0	0	0	0	23	30	30	23	30	30							
PHEV on E-10, E-85 & Elec.	0	0	0	0	0	0	0	0	2	18	30	2	18	42							
Fcell Vehicle	0	0	0	0	0	0	0	0	0	2	10	0	2	10							
Total Check=			100	100	100	100	100	100	100	100	100	100	100	100							
						GHG Red. Performance from 2005=				11	-0.35	-0.52	#	-0.11	-0.46	-0.84					
						GHG Red. Performance from 1990=				0.07	-0.22	-0.43		0.07	-0.36	-0.80					
Assumed Relative Fuel Economy -- Fleet-wide MPG gas-gal.eq.																					
Gas or Diesel (G/D)	18.8	20.0	20.0	20.0	20.0	23.4	26.0	26.0	23.4	26.0	26.0	23.4	30.0	42.0	Assumed Avg. Value equal to gas/diesel						
Biofuel as E-85 [in GGEq]	18.8	20.0	20.0	20.0	20.0	23.4	26.0	26.0	23.4	26.0	26.0	23.4	30.0	42.0	40% better tha G/D						
PHEV on Gas									32.8	36.4	36.4	32.8	42.0	58.8	100 % > PHEV on gas						
PHEV on Elec.									65.5	72.8	72.8	65.5	84.0	117.6	100% > G/D						
Fcell Vehicle									46.8	52.0	52.0	46.8	60.0	84.0							
Calculation of Fleet Fuel Economy						MPG fraction contributed to the fleet by each vehicle/fuel combination															
Gas & Diesel [on E-10]						20.0	23.4	26.0	26.0	17.6	13.0	7.8	17.6	15.0	7.6						
E-85						0.0	0.0	0.0	0.0	5.4	7.8	7.8	5.4	9.0	12.6						
PHEV on E-10 & E-85						0.0	#	0.0	0.0	0.3	3.3	3.3	0.3	3.8	7.4						
PHEV on Elec.						0.0	#	0.0	0.0	0.7	6.6	15.3	0.7	7.6	34.6						
Fcell Vehicle						0.0	0.0	0.0	0.0	0.0	1.0	5.2	0.0	1.2	8.4						
Fleet MPG =						20.0	23.4	26.0	26.0	23.9	31.7	39.4	23.9	36.5	70.5						
Use of E-85 by FFVs and E-10, E-85 and Elec by PHEVs																					
Percent FFV Energy fr. E-85						0	0	0	72	80	90	72	80	90							
Percent PHEV Energy fr. E-10						0	0	0	30	20	10	30	20	10							
Percent PHEV Energy fr. E-85						0	0	0	20	30	20	20	30	20							
Percent PHEV Energy fr. Elec.						0	0	0	50	50	70	50	50	70							
Summary of Fuel Quantities																					
Gas & Diesel			17.4	20.5	26.3	14.4	15.3	19.7	12.1	8.3	5.6	12.1	6.8	2.0							
Gasoline on E-10	% =	100	17.4	20.5	26.3	14.4	15.3	19.7	10.6	6.3	3.9	10.6	5.2	1.1							
E-85 FFV on E-10						0.0	0.0	0.0	0.9	0.8	0.4	0.9	0.6	0.2							
E-85 FFV on E-85						0.0	0.0	0.0	0.5	0.6	0.8	0.5	0.5	0.3							
PHEV on E10						0.0	0.0	0.0	0.1	0.5	0.4	0.1	0.4	0.3							
PHEV on E85						0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1							
Biofuel as EtOH in E-85 or E10			1.3	1.5	2.0	1.1	1.2	1.5	2.9	3.7	4.0	2.9	3.1	1.9							
Gas & Diesel on E-10	% =	100	1.3	1.5	2.0	1.1	1.2	1.5	0.8	0.5	0.3	0.8	0.4	0.1							
E-85 FFV on E-10						0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0							
E-85 FFV on E-85						0.0	0.0	0.0	2.0	2.6	3.0	2.0	2.1	1.4							
PHEV on E10						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
PHEV on E85						0.0	0.0	0.0	0.0	0.6	0.7	0.0	0.5	0.4							
Electricity																					
PHEVs on Elec	% =	100				0.0	0.0	0.0	0.2	1.2	2.9	0.2	1.0	1.9							
Fcell Vehicle	% =	100				0.0	0.0	0.0	0.0	0.3	1.4	0.0	0.2	0.6							
Total Vehicle Energy in Gas-gal-eq			18.7	22.1	28.3	15.5	16.5	21.1	15.2	13.5	13.9	15.2	11.1	6.4							
VTM by Vehicle Type & Fuel																					
Gas & Diesel on E-10			374	442	567	363	429	550	266	176	109	266	167	49							
E-85 on E-10			0	0	0	0	0	0	23	21	11	23	20	8							
E-85 on E-85			0	0	0	0	0	0	59	84	98	59	80	73							
PHEV on E10			0	0	0	0	0	0	3	16	14	3	16	15							
PHEV on E85			0	0	0	0	0	0	2	27	30	2	25	32							
PHEVs on Elec			0	0	0	0	0	0	10	89	213	10	84	222							
Fcell Vehicle			0	0	0	0	0	0	0	14	73	0	13	54							
VTM by Vehicle Type only																					
Gas & Diesel on E-10			374	442	567	363	429	550	266	176	109	266	167	49	Calculated as follows:						
E-85 on E-10 or E-85			0	0	0	0	0	0	82	106	109	82	100	81	[Fuel in GGEq] X MPG						
PHEV on E10, E85 or Elec			0	0	0	0	0	0	15	132	258	15	125	269	[for specific fuel type]						
Fcell Vehicle			0	0	0	0	0	0	0	14	73	0	13	54							
			374	442	567	363	429	550	363	427	548	363	405	452							
Vehicle Population by Type																					
Gas & Diesel on E-10	VMT/yr	12.5	29.9	35.3	45.3	29.5	34.8	44.6	21.6	14.3	8.8	21.6	13.9	4.3	Assumes measures						
E-85 on E-10 or E-85	per	12.5	0.0	0.0	0.0	0.0	0.0	0.0	6.6	8.6	8.8	6.6	8.3	7.1	that reduce VMT also						
PHEV on E10, E85 or Elec	Veh.	12.5	0.0	0.0	0.0	0.0	0.0	0.0	1.2	10.7	21.0	1.2	10.4	23.6	reduce vehicle owner-						
Fcell Vehicle	[1000s]	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.9	0.0	1.1	4.7	ship by 1/2 the VMT						
			29.9	35.3	45.3	29.5	34.8	44.6	29.4	34.7	44.5	29.4	33.7	39.8	reduction						

Values Shaded in are inputs assumed by ARB staff